CLAIMS

1. A device for extracting plastic items (5) provided a first portion having a predetermined transversal dimension and a second adjacent portion (9) having a transversal dimension greater than the first portion,

the device comprising a supporting structure (20, 21) and gripping means (29, 30) suitable to extract the items (5) from the holders (7), characterised by the fact that the device is provided with a plate (23) fixed to the supporting structure (20, 21) and by the fact that

the gripping means (29, 30) comprise a plurality of straight slits (26) reciprocally parallel whereby they all face a predefined direction (D),

wherein each slit (26) is provided with first sections of a first predetermined width (L1) and second sections forming constrictions (29, 30) of a second predetermined width (L2),

wherein the second predetermined width (L2) is smaller than the transversal dimension of the second portion (9) of the item and greater than the dimensions of the first portion of the item,

whereby the first width (L1) is such to allow the second part (9) of the items (5) to fit into the slit (26), and the second width (L2) is such not to allow the second part (9) of the items (5) to fit into the slit (26),

wherein there are provided control and operating means to make the plate (23) move in the appropriate direction (D) by a predefined length.

2. A device as claimed in claim 1, wherein the items (5) are preforms the first portion is the body of the preform and the second portion is a ring (9).

3. A device as claimed in claim 2, wherein the containers are conditioning cavities (7) arranged side by side and in regular, parallel rows on a surface (6', 6») of a mobile element (6).

4. A device as claimed in claim 3, wherein, in correspondance of the constrictions, the plate (23) has a thickness smaller than the distance between the ring (9) and the outer edge of the holder (7) in order to be able to fit into said space when moved.

5. A device as claimed in claim 4, wherein the mobile component is a turret pivotable around a horizontal axis, parallel to the plane of said plate (23).

6. A device as claimed in claim 2 comprising a safety system for adjusting an end-stop of the turret (6).

7. A device as claimed in claim 6 comprising a system for adjusting the height of the plate (23) from ground level (22).

8. A device as claimed in one or more of the previous claims, wherein the slits (26) are of the through type, passing through the thickness of the plate (23), whereby the preforms that are extracted from the holders of the turret are able to fall through the plate (23).

9. A device as claimed in one or more of the previous claims comprising motor means suitable to move the plane of the plate (23) in a substantially direction orthogonal to the plane itself for extracting the preforms (5).

10. A process for extracting a plurality of plastic items (5) from their holders (7) by means of the device as claimed in claim 1 wherein there is provided a plate (23) with straight and parallel slits having first wider sections and second sections with constrictions, wherein, when the plastic reaches a predefined consistency the extraction process starts, the process comprising the following steps:

a) Nearing the holders (7) containing the plastic items (5) to the extracting device,

b) Inserting the items (5) into the slits (26) by making the second wider part (9) of the items enter the wider areas of the slits (26),

c) translating the plate (23) by a predetermined length in the direction (D) until the second wider part (9) of the plastic items comes into contact with the constrictions in the slits so as to hook the items into the plate (23),

d) Moving away the plate (23) from the holders (7) reciprocally to extract the items (5) from the holders (7).

11. A process as claimed in claim 10 wherein the movement of the plate occurs by a length equal to the distance between the axes of the two holders (7).

12. A process as claimed in claim 11 wherein the width constrictions of the slits (26) form teeth, the items (5) are preforms and wherein the teeth are fitted into the space between the ring (9) and the preform (5) and the end of the holder (7) containing said preform (5).